

REMARKS

These remarks attend to all issues presented in the Office Action dated May 14, 2008. Claims 1, 2, 5-9 and 11-18 are pending in the application. Claims 3-4 and 10 have been cancelled. Claims 1, 2, 5, and 7-12 are currently amended. Claims 13-18 are new claims.

Claim 1 is directed to a DNA molecule and has been amended to recite the Sequence identifier. Claim 2 is directed to an RNA molecule and has been amended to recite the Sequence identifier. Claim 7 has been amended to clarify that the method is directed to synthesis of an RNA, not DNA molecule.

New Claims 13-14 relate to the mutant SL III e+F (A297G) as disclosed in Figure 6 and relevant text in the original Specification.

New Claims 15-18 all relate to a method for treating and/or preventing HCV infection by introducing into a person an agent capable of binding to the ribosomal protein S5 and thereby reducing HCV IRES mediated translation. Support for these claims can be found at line 8 on page 4 to line 13 and page 5. Furthermore, lines 13-17 on page 3 of the original specification teaches that the inhibition of HCV IRES mediated translation is dependent on the RNA structure, and that stabler derivatives using different nucleotide (e.g. phosphorothioate) or backbone (e.g. PNA) and small molecule structural analogs of the SL III e+F RNA can be utilized to increase the deliverability and stability of the therapeutic molecule while maintaining the inhibitory activity.

The Specification has been amended to add sequence identifiers to the sequences disclosed in the application. No new matter has been added by these amendments.

I. Sequence Listing and Sequence identifier

A paper copy of the Sequence listing containing the sequences (SEQ ID Nos. 1-5) as disclosed and claimed, along with a computer readable format containing the same are being submitted.

The Specification is amended to add Sequence Identifiers to the sequences. No new matter has been added to the application by these amendments.

II. Claim Rejections-35 USC 112 Second Paragraph

Claims 3-10 stand rejected under 35 USC 112 second paragraph as being indefinite.

The phrase “the structural analog or mimic” has been deleted from all of Claims 3-9.

The limitation “using known methods” has been deleted in Claim 7. The term “assay” has been replaced with the term “method.”

Claim 8 has been amended for purpose of clarification.

Claims 3, 4 and 10 have been cancelled which renders the rejection moot.

Withdrawal of the rejection under 35 USC 112 second paragraph of these claims is respectfully respected.

III. Claim Rejections-35 USC 112 First Paragraph-Written Description

Claims 2-9, 11 and 12 stand rejected under 35 USC 112 first paragraph as failing to comply with the written description requirement. The Examiner recognizes that the specific sequences recited in the claims meet the written description requirement. However, the Examiner maintains that the recited structural analogs and mimics were not described in the original specification in such a way as to reasonably convey to one skilled in the art that the inventor had possession of the claimed invention at the time the application was filed. The Examiner reasoned that Applicant has not disclosed whether the inhibitory activity of the nucleic acid are due to its sequences, its structure or some combination of the two.

Applicant respectfully disagrees because the original Specification teaches that “the inhibitory activity is dependent on the RNA structure.” *See e.g.*, lines 13-15 on page 3 of the original Specification. Given the known stem-loop structure of the RNA as disclosed in this application and in other references, one of ordinary skill would be able to predict whether other nucleic acid molecules, including DNA or RNA, or other chemical compounds, would have the same or similar functionality based on their structure.

Even if the Examiner is not convinced by Applicant’s argument, the term “structural analogs and mimic” has been deleted from Claims 2, 5-9, 11 and 12, and Claims 3-4 have been cancelled. Withdrawal of the rejection under 35 USC 112 first paragraph of these claims is respectfully respected.

IV. Claim Rejections-35 USC 102

Claims 5-9 stand rejected under 35 USC 102(b) as being anticipated by U.S. Patent NO. 6,127,116 to Rice et al., (“Rice” hereinafter). Applicant respectfully disagrees. Rice relates to determination of the genome RNA sequences of an HCV variant and to the construction of infectious HCV DNA clones. Applicant has compared the sequence of Claim

5 with those disclosed in Rice, and found that the sequences are not the same. Thus, because Rice does not teach or suggest the exact sequence as recited in Claim 5-9, Rice does not anticipate the invention of Claims 5-9. Withdrawal of the rejection under 35 USC 102 of these claims is respectfully respected.

In view of the above Remarks, Applicants have addressed all issues raised in the Office Action dated May 14, 2008, and respectfully solicit a Notice of Allowance. Should any issues remain, the Examiner is encouraged to telephone the undersigned attorney.

Applicants believe that no fees are currently due. If, however, any fee is deemed necessary in connection with this Response, the Commissioner is authorized to charge Deposit Account No: 12-0600.

Respectfully submitted,

LATHROP & GAGE LLP



X. Peter Chen, Reg. No. 51,552
4845 Pearl East Circle, Suite 201
Boulder, CO 80301
Tele: (720) 931-3014
Fax: (720) 931-3001